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The Distribution of Irish Char (*Salvelinus alpinus*)

by

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Char* (*Salvelinus alpinus*) are rare in most places in Ireland to-day but they were formerly more widespread and abundant. About twenty-five years ago the Fisheries Division of the Department of Agriculture and Fisheries started to offer rewards for char submitted for examination and this has had the result of providing specimens which would otherwise have been lost. Many of these specimens were taken on rod and line but in recent years considerable numbers have been obtained in connection with either the improvement schemes of the Inland Fisheries Trust, Inc. or investigations concerned with the effects of drainage operations on Lough Conn.

Captures by rod and line often give the wrong impression of the abundance of char. For example, only a small number of char have been taken from Lough Conn by rod and line in the past twenty-five years, yet at least 150 were taken in experimental nets in October and November, 1966 alone.

Regan (1908) in a revision of Irish char recognised six "species" as follows:—

- A. *S. colii*, Cole's char;
- B. *S. fimbriatus*, Coomasaharn char;
- C. *S. grayi*, Gray's char;
- D. *S. obtusus*, Blunt snouted Irish char;
- E. *S. scharffi*, Scharff's char, and
- F. *S. trevelyanii*, Trevelyan's char.

It is proposed in this paper, for convenience, to adopt these six so-called species and to divide the localities into three groups as follows:—

- i. Those localities from which one or more specimens have been obtained from 1930 onwards (specimens were also usually known before 1930).
- ii. Those localities from which specimens taken before 1930 have been preserved.
- iii. Those localities for which there is information in the literature but specimens are not available for examination. Char in some of these localities are undoubtedly extinct.

For convenience within each category the localities have been listed in alphabetical order under the County names. The number after the locality in brackets in categories i and ii corresponds to that on sketch map in Fig. 1 and the first reference indicates where full information can be obtained from the literature. The words *BRIT. MUS.* or *DUB. MUS.* indicate that one or more specimens are preserved from the locality in question, either in the British Museum (Natural History), London or the National Museum, Dublin. The term *Fisheries Records* indicates that specimens have been recorded in the Fisheries Division of the Department of Agriculture and Fisheries, Dublin. The *type* specimen of *S. scharffi* is in the National Museum, Dublin and those of the other five species are in the British Museum (Natural History), London.

i. LOCALITIES FOR WHICH SPECIMENS TAKEN FROM 1930 ONWARDS ARE KNOWN

A. *Salvelinus colii*.

County Clare.

- a. Cloonsnaghta, Lough (1), *DUB. MUS.*
Fisheries Records. Two specimens in 1964.
- b. Gortlass, Lough (2), *BRIT. MUS.*
Went, 1945, a, 173-4. *Fisheries Records*. Two specimens in 1963 and two in 1964.
- c. Lickeen, Lough (3), *BRIT. MUS.*
Went, 1945, a, 175 (under Ennistymon). *Fisheries Records*. Single specimen in 1964.

* In Ireland the name is usually spelt with a single r.

County Donegal.

- a. Eask, Lough (4), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 169-171. Went, 1946. Eighteen specimens in 1944.
- b. Fad, Lough (5) in townland of Meendoran, *BRIT. MUS.*
Went, 1945, a, 184-5. Went, 1945, b. Went, 1946. Went, 1953. Healy, 1956. Four specimens from 1944 to 1955.
- c. Fad, Lough (6) adjacent to townland of Moneydarragh, *DUB. MUS.*
Went, 1945, a, 184. Went, 1953. Went and Twomey, 1957. *Fisheries Records*. Thirty specimens from 1947 to 1966.
- d. Kindrum, Lough (7), *DUB. MUS.*
Went, 1945, a, 185. Went, 1953. Single specimen in 1947.
- e. Sessiagh, Lough (8), *BRIT. MUS.*
Went, 1945, a, 174. *Fisheries Records*. Single specimen in 1937 and another in 1965. The writer has been informed that a number of other specimens were taken on rod and line between 1940 and 1950.

County Galway. (See also note added in press, page 9).

- a. Ballinahinch Lake (9), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 173. *Fisheries Records*. One specimen in 1942.
- b. Corrib, Lough (10). *DUB. MUS.*
Went, 1945, a, 184. Went, 1955. Went and Twomey, 1957. *Fisheries Records*. Six specimens from 1954 to 1962.
- c. Glenicmurrin, Lough (11), *BRIT. MUS.*
Went, 1945, a, 173. Specimen in 1937.
- d. Inagh, Lough (9). This lake is on the Ballinahinch River system in which other lakes have provided char. *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 172-3. Went, 1945, b. Specimens in 1930, 1938, 1945, 1947 and 1948.
- e. Kylemore, Lough (12), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, c, 173. Went, 1945, b. Two specimens in 1945.
- f. Shindilla, Lough (13), *DUB. MUS.*
Went, 1955. Single specimen in 1954.

County Kerry.

- a. Cloonee Lake (14), *BRIT. MUS.*
Went, 1945, a, 175. *Fisheries Records*. Single specimen in 1935 and another in 1963.
- b. Currane, Lough (15), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 174. Went, 1953. One specimen in 1947 and one in 1953.
- c. Inchiquin (14). This lake is on the same river system as Cloonee Lake, mentioned above.
Twomey, 1960. Two specimens in 1958.

County Longford.

- a. Loughnabrack (16).
Went, 1945, a, 186. *Fisheries Records*. Two specimens in 1966.

County Mayo.

- a. Conn, Lough (17), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 171. *Fisheries Records*. Large numbers of specimens including those from pike stomachs since 1930.
- b. Dhulough (18), *DUB. MUS.*
Fisheries Records. Specimen in 1969.

c. Mask, Lough (19), *BRIT. MUS.* and *DUB. MUS.*
Went, 1944. Went, 1945, a, 172. Went, 1945, b. Went, 1946. *Fisheries Records*. Thirty seven specimens from 1942 to 1957.

B. Salvelinus fimbriatus.

County Kerry.

a. Coomasaharn, Lough (20), *BRIT. MUS.*
Went, 1945, a, 178. Twomey, 1960. Specimens in 1936, 1937 and 1959.

C. Salvelinus grayi.

County Donegal

a. Melvin, Lough (21), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 175-77. Twomey, 1960. *Fisheries Records*. Three specimens in 1958 and one in 1961. Others known to have been taken on rod and line but not preserved.

D. Salvelinus obtusus.

County Kerry.

a. Killarney Lakes (22), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 178. Went, 1953. One specimen from 1935 and second from 1948.

County Wicklow.

Dan, Lough (23), *BRIT. MUS.*
Went, 1945, a, 177-8. Went, 1953. *Fisheries Records*. Two specimens in 1948 and one in 1963.

ii. LOCALITIES FOR WHICH SPECIMENS ARE KNOWN FROM BEFORE 1930.

A. Salvelinus colli.

County Donegal.

a. Derg, Lough (24), *BRIT. MUS.*
Went, 1945, a, 171.

County Galway.

a. Derryneen, Lough (9). This lake is on the Ballinahinch River system in which other lakes have furnished char. *DUB. MUS.*

b. Glendalough (9). This lake is also on the Ballinahinch River system. *BRIT. MUS.*
Went, 1945, a, 173.

County Mayo.

a. Glenawough Lough (25), *DUB. MUS.*
Went, 1945, a, 173.

County Kerry.

a. Currane, River (15). This river drains Lough Currane (see page 6).
Went, 1944. Specimen from 1908, originally in National Museum, Dublin, but does not seem now to be available (see O'Riordan, 1965).

b. Iskanamacteery, Lough (15), *BRIT. MUS.* This lake is in the upper waters of the Waterville or Currane River system which has provided other specimens of char.

D. *Salvelinus obtusus*.

County Kerry.

a. Acoose Lough (26), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 178.

County Wicklow.

a. Luggala, or Tay, Lough (27), *BRIT. MUS.* and *DUB. MUS.*
Went, 1945, a, 177.

E. *Salvelinus scharffi*.

County Westmeath.

a. Ennell, Lough (28), *DUB. MUS.*
Went, 1945, a, 203-4.

b. Owel, Lough (29), *DUB. MUS.*
Went, 1945, a, 179.

F. *Salvelinus trevelyani*.

County Donegal.

a. Finn, Lough (30), *BRIT. MUS.*
Went, 1945, a, 179.

iii. LOCALITIES FROM WHICH SPECIMENS ARE REFERRED TO IN LITERATURE.

Since all but one of the localities have been covered in Went (1945, a) the information can be given conveniently in the form of a simple table as follows:—

Map reference in Fig. 1	County	Water	Page in Went, 1945, a.	Date specimens obtained, if recorded, and general remarks.
31	Antrim	L. Neagh	180-2	Extinct? About 1824.
32	Cavan	Cornagall L.	186	No details
33	Clare	Fin L.	187	Before 1845
34	"	Inchiquin L.	187	ditto
35	Cork	L. Allua	182-4	Extinct? 1830.
36	Donegal	Gartan L.	185	1838
37	"	Keel L.	185	No details
38	"	Mintiaghs L.	184-5*	1905
39	"	L. Veagh	185	No details
40	Fermanagh	L. Erne	185	" "
10	Galway	Bofin L.	186	This lake is on a river which flows into L. Corrib from which char have been obtained since 1930 (see page 6).
9	"	Derryclare L.	186	This lake is in the Ballinahinch River system and char have been obtained from other lakes within it. (see page 6).
9	"	Ourid L.	186	ditto.
41	Longford	L. Gowna	No reference*	No details
42	Mayo	Castlebar L.	186	Reported in 1846.
43	Monaghan	Eagish L.	187	No details
44	Waterford	Comeragh Ls.	187	Referred to in 1774.
45	Wicklow	Glendalough	188	Referred to in 1832.

* See Went, 1945, b.

(Note added in press). Since this paper was written a Cole's char was obtained on 31 July, 1970, from Lough Fee, Co. Galway, just north of Kylemore Lough (shown as 12 in Figure 1).

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REFERENCES

- Healy, A. (1956). Further specimens of Irish char *Salvelinus colii*, Günther. *Irish Nat. J.* xii. 41.
- O'Riordan, C. (1965). *A catalogue of the collection of Irish fishes in the National Museum of Ireland*, Dublin.
- Regan, C. T. (1908). A preliminary revision of the Irish char. *Ann. Mag. Nat. Hist.* Ser. 8. ii.
- Twomey, Eileen (1960). Notes on some Irish char (*Salvelinus spp.*) VII. *Irish Nat. J.* xiii. 134-137.
- Went, Arthur E. J. (1944). Notes on some Irish char. *Irish Nat. J.* viii. 202-205.
- (1945, a). The distribution of Irish char (*Salvelinus spp.*) *Proc. Roy. Irish Acad.* 50.B. 8, 167-189.
- (1945, b). Notes on some Irish char (*Salvelinus colii*, Günther)—III. *Ann. Mag. Nat. Hist.* Ser. 11. xii. 616-623.
- (1946). Notes on some Irish char (*Salvelinus colii*, Günther)—II. *Irish Nat. J.* viii. 415-419.
- (1953). Notes on some Irish char (*Salvelinus spp.*) IV. *Irish Nat. J.* xi. 91-97.
- (1955). Notes on Irish char, (*Salvelinus colii*, Günther)—V. *Irish Nat. J.* xi. 246-248.
- Went, Arthur E. J. and Twomey, Eileen (1957). Notes on Irish char (*Salvelinus colii*, Günther)—VI. *Irish Nat. J.* xii. 205-6.